

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05					R-1 ITEM NOMENCLATURE ENHANCED MODULAR SIGNAL PROCESSOR (EMSP)/ 0604507N					
COST (\$ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost		0.833	1.004	0.513	1.335	1.341	1.353	1.323	CONT.	CONT.
Enhanced Modular Signal Processor/Q1440		0.833	1.004	0.513	1.335	1.341	1.353	1.323	CONT.	CONT.
Quantity of RDT&E Articles										

A. Mission Description and Budget Item Justification: The objective of this Program Element (PE) is to improve Navy Signal Processing Hardware and Software capabilities.

PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 Accomplishments:

(\$0.428) Via the Peer Review Process (PRP), completed preliminary design of a Common COTS signal processing solution for the DDG51 AN/SQQ-89 Surface ASW Combat System, CV-TSC, SH-60 Airborne Low Frequency Sonar (ALFS), and P-3 Special Projects systems platforms using Common Operating Environment /Tactical Advanced Signal Processor (COE/TASP).

(\$0.405) Supported Common COTS signal processing and other Navy applications using the Final Vector Signal Image Processing (VSIP) Library for COE/TASP. Continued to work with industry to develop and enhance capabilities/functions for VSIP Library. Initiated migration of Message Passing Interface/Real Time (MPI/RT) functionality into the Common Object Request Broker Agent (CORBA).

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<p>2. (U) FY 2002 Plans:</p> <p>(\$0.804) Design, develop, and begin integration of a portable AN/UYS-X test set to support AN/UYS-1 and AN/UYS-2/2A platform system integration activities.</p> <p>(\$0.200) Develop a working group to include DoD, industry, and academia in order to conduct research and investigation into the development and productization of a Virtual Digital Signal Processing Operating System (VDOS). This follow-on activity will be modeled after the successful VSIP Library effort with the goal of providing a portable OS to support the development of re-usable signal processing application software.</p> <p>3. (U) FY 2003 Plans:</p> <p>(\$0.238) Integrate and test a portable AN/UYS-X test set to support AN/UYS-1 and AN/UYS-2/2A platform system integration activities.</p> <p>(\$0.200) Continue development of VDOS.</p> <p>(\$0.075) Investigate legacy AN/UYS-X host computer replacement for later migration of Software Engineering Facility (SEF) software.</p>																														
<p>B. Program Change Summary</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 20%; text-align: center;">FY 2001</th> <th style="width: 20%; text-align: center;">FY 2002</th> <th style="width: 30%; text-align: center;">FY 2003</th> </tr> </thead> <tbody> <tr> <td>FY 2002 President's Budget:</td> <td style="text-align: center;">0.867</td> <td style="text-align: center;">1.013</td> <td></td> </tr> <tr> <td>Appropriated Value:</td> <td style="text-align: center;">0.875</td> <td style="text-align: center;">1.013</td> <td></td> </tr> <tr> <td colspan="4"> </td> </tr> <tr> <td>Adjustments to FY 2001/2002 Appropriated Value/ FY 2002 President's Budget:</td> <td style="text-align: center;">-0.042</td> <td style="text-align: center;">-0.009</td> <td></td> </tr> <tr> <td colspan="4"> </td> </tr> <tr> <td>FY 2003 Pres Budget Submit:</td> <td style="text-align: center;">0.833</td> <td style="text-align: center;">1.004</td> <td style="text-align: center;">0.513</td> </tr> </tbody> </table> <p>Funding: FY 2001 changes include decreases for Small Business Innovative Research (SBIR) tax assessment (-0.015) and minor pricing adjustments (-0.027). FY 2002 decrease for Management Reform Initiatives (-0.009).</p>				FY 2001	FY 2002	FY 2003	FY 2002 President's Budget:	0.867	1.013		Appropriated Value:	0.875	1.013						Adjustments to FY 2001/2002 Appropriated Value/ FY 2002 President's Budget:	-0.042	-0.009						FY 2003 Pres Budget Submit:	0.833	1.004	0.513
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<p>C. Other Program Funding Summary</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 10%;">FY 2000</th> <th style="width: 10%;">FY 2001</th> <th style="width: 10%;">FY2002</th> <th style="width: 10%;">FY 2003</th> <th style="width: 10%;">FY 2004</th> <th style="width: 10%;">FY 2005</th> <th style="width: 10%;">FY 2006</th> <th style="width: 10%;">FY 2007</th> <th style="width: 10%;">Complete</th> <th style="width: 10%;">Cost</th> </tr> </thead> <tbody> <tr> <td>OPN P-1 Line Item 95 (B.L. 298000/72DC)</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td> <td style="text-align: center;">0.9</td> <td style="text-align: center;">1.5</td> <td style="text-align: center;">1.3</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">0.3</td> <td style="text-align: center;">0.4</td> <td style="text-align: center;">0.6</td> <td style="text-align: center;">0.7</td> <td style="text-align: center;">CONT.</td> <td style="text-align: center;">CONT.</td> </tr> </tbody> </table> <p>D. Acquisition Strategy: Development work in this project is performed primarily by:</p> <ul style="list-style-type: none"> - Naval Air Warfare Center - Aircraft Division, Patuxent River (NAWC-AD): NSP Computer Program Support Activity (CPSA), Technical Design Agent (TDA) - Naval Surface Warfare Center, Crane (NSWC): NSP Software Engineering <p>Future Plan:</p> <p>Design, develop, integrate and test a AN/UYS-X portable test set in FY 2002 and FY 2003; Develop Virtual Digital Signal Processing Operating System (VDOS) and tools in FY2002 through 2004. Investigate legacy AN/UYS-X host computer replacement for later migration of Software Engineering Facility (SEF) software in FY 2003 through FY 2005.</p>											FY 2000	FY 2001	FY2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Complete	Cost	OPN P-1 Line Item 95 (B.L. 298000/72DC)												0.9	1.5	1.3	0.0	0.3	0.4	0.6	0.7	CONT.	CONT.
	FY 2000	FY 2001	FY2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Complete	Cost																																
OPN P-1 Line Item 95 (B.L. 298000/72DC)																																										
	0.9	1.5	1.3	0.0	0.3	0.4	0.6	0.7	CONT.	CONT.																																

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APPROPRIATION/BUDGET ACTIVITY									February 2002			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05									R-1 ITEM NOMENCLATURE			
									ENHANCED MODULAR SIGNAL PROCESSOR(EMSP)/ 0604507N			
E. Schedule Profile												
Portable Test Set												
	2002				2003				2004			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Portable Test Set												
Develop system specification												
Design system												
Contract for delivery of COTS components												
Develop COTS version interfaces												
Develop software device drivers												
Develop software for COTS components												
Fabricate and integrate systems												
Conduct systems testing												

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DATE:

February 2002

APPROPRIATION/BUDGET ACTIVITY

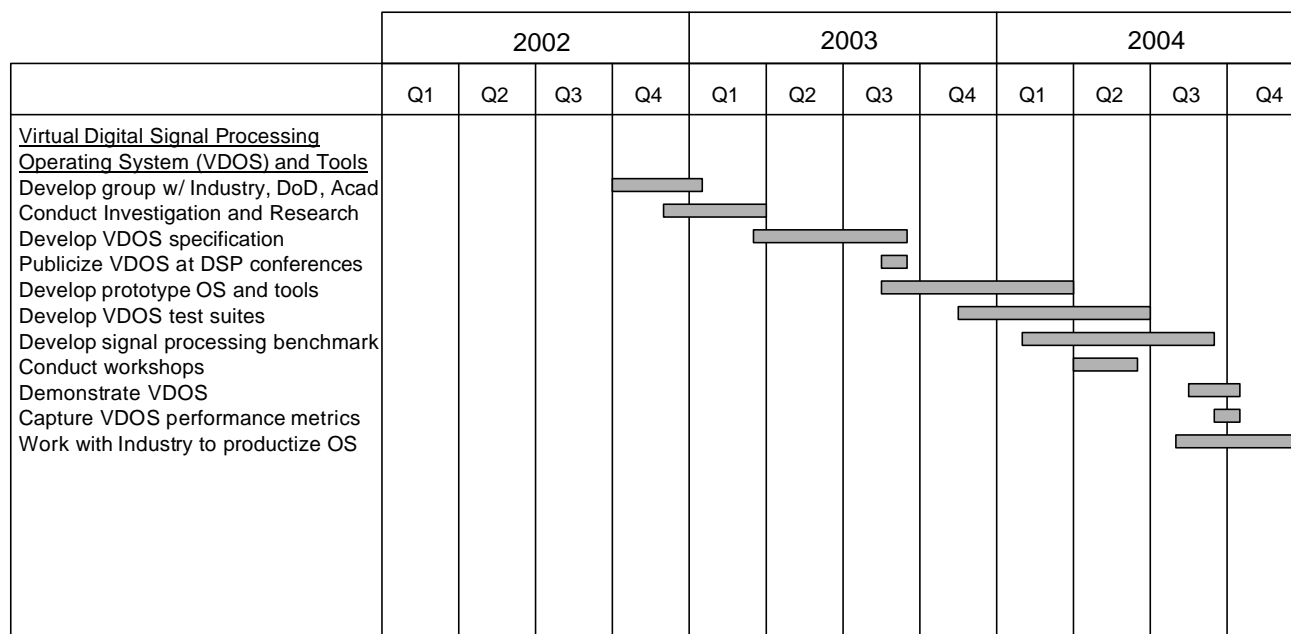
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05

R-1 ITEM NOMENCLATURE

ENHANCED MODULAR SIGNAL PROCESSOR(EMSP)/ 0604507N

E. Schedule Profile

Virtual Digital Signal Processing Operating System (VDOS) and Tools



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RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-05								ENHANCED MODULAR SIGNAL PROCESSOR(EMSP)/ 0604507N					
E. Schedule Profile													
Legacy Host Computer Replacement													
	2002				2003				2004				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<u>Legacy Host Computer Replacement</u>													
AN/UYS-1													
Investigate legacy computer replace.													
Contract for delivery of replacement host computer													
Develop software for COTS components													
Validation/regression testing													
AN/UYS-2/2A													
Investigate legacy computer replace.													
Contract for delivery of replacement host computer													
Develop software for COTS components													
Validation/regression testing													

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E,N/ BA-05			PROGRAM ELEMENT 0604507N			PROJECT NAME AND NUMBER EMSP V1440/Q1440						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Signal Processor COTS Technology	WR/MP	SPAWAR/GTRI/MSU	2.718	0.405	12/00	0.090	01/02			0.000	3.213	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			2.718	0.405		0.090		0.000		0.000	CONT.	
Remarks:												
Development Support Equipment												
Software Engineering Support	WR	NAWC/AD	3.105	0.070	11/00	0.566	11/01	0.302	11/02	CONT.	CONT.	
Software Engineering Support	WR	NSWC/Crane				0.302	11/01	0.116	11/02	CONT.	CONT.	
Common Processing	Var.	Misc.		0.050	11/00					CONT.	CONT.	
Common Processing	MP	ARI		0.225	11/00					CONT.	CONT.	
Miscellaneous	Var.	Misc.				0.006	Var.	0.063	Var.	CONT.	CONT.	
Subtotal Development Support			3.105	0.345		0.874		0.481		0.000	CONT.	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E,N/BA-05			0604507N			EMSP V1440/Q1440						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Contractor Engineering Support											0.000	
											0.000	
Program Management Support	CPFF	TWD	0.205	0.083	02/01	0.040	02/02	0.032	02/03	CONT.	CONT.	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.205	0.083		0.040		0.032		0.000	CONT.	
Remarks:												
Total Cost			6.028	0.833		1.004		0.513		0.000	CONT.	
Remarks:												

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